

What is claimed is:

1 1. A system development method for developing a system
2 using a development-support system made up of a server used to
3 provide information about functional units each implementing a
4 different function and files describing said different functions,
5 at least one developer client to develop said functional units
6 and at least one user client to develop said system configured
7 to perform desired operations by combining said functional units,
8 wherein all of said server, developer client, and user client are
9 connected through an internet, comprising:

10 a first step, to be taken by said user client, of registering
11 an operator of said user client as a user of said
12 development-support system ;

13 a second step, to be taken by said user client, of obtaining,
14 by referring to information about said functional units, files
15 describing a plurality of said functional units which are needed
16 for development of said system;

17 a third step, to be taken by said user client, of developing
18 said system by combining files describing said plurality of said
19 functional units;

20 a fourth step, to be taken by said user client, of
21 transmitting question information about said functional units or
22 keyword information regarding information required for
23 development of said system to said server, when said system does
24 not operate properly due to malfunctions of said functional units
25 or when said information required for development of said system
26 is to be acquired; and

27 a fifth step, to be taken by said user client, of obtaining,

28 when necessary, a file of another functional units, based on reply
29 information to said question information or on said information
30 retrieved according to said keyword information and, if necessary,
31 of changing design to have another try of developing said system
32 and checking operations of a developed system.

1 2. The system development method according to Claim 1,
2 wherein, in said second step, said files of said plurality of said
3 functional units are allowed to be obtained only when an
4 application for individual or collective acquisition of said
5 files is made and a right to acquire said files is granted through
6 examination of the application for acquisition of each of said
7 functional units or of every collective group of said functional
8 units.

1 3. The system development method according to Claim 1,
2 wherein, in said fourth step, when any question about said
3 functional units that has been already asked is contained in said
4 question information, a notification informing that said question
5 about said functional units has been already asked is provided,
6 and other information required for development of said system is
7 able to be obtained.

1 4. The system development method according to Claim 1,
2 wherein said reply information to said question information is
3 transmitted to each of both said user clients and said developer
4 clients which is operated by a user having already acquired said
5 files including a user having transmitted said question
6 information, a user having wanted to obtain said files but having

7 not yet obtained said files and, when there is a model functional
8 unit that has been used as a model for development of said
9 functional unit, a user having developed said model functional
10 unit.

1 5. The system development method according to Claim 1,
2 further comprising a sixth step of transmitting, when said
3 developer of said functional units has found a malfunction of said
4 functional units, contact information notifying that said
5 functional units have said malfunction and information about a
6 method for taking a measure against said malfunction.

1 6. The system development method according to Claim 1,
2 wherein said system is a semiconductor device and said functional
3 unit is a basic logic element or a basic logic circuit constructed
4 by combining a plurality of said basic logic elements.

1 7. The system development method according to Claim 1,
2 wherein said system is a semiconductor device and said functional
3 units include a central processing unit, storage device, buffer,
4 and peripheral device and wherein a file of said peripheral device
5 is so constructed as to be able to select either of a file to
6 implement its function by using hardware or a file to implement
7 its function by using software.

1 8. The system development method according to Claim 1,
2 wherein said system is software and said functional units are
3 routines or objects to perform predetermined processing.

1 9. A storage medium storing system development program
2 for causing a computer to execute a method for developing a system
3 using a development-support system made up of a server used to
4 provide information about functional units each implementing a
5 different function and files describing said different functions,
6 at least one developer client to develop said functional units
7 and at least one user client to develop said system configured
8 to perform desired operations by combining said functional units,
9 wherein all of said server, developer client, and user client are
10 connected through an internet, comprising:

11 a first step, to be taken by said user client, of registering
12 an operator of said user client as a user of said
13 development-support system ;

14 a second step, to be taken by said user client, of obtaining,
15 by referring to information about said functional units, files
16 describing a plurality of said functional units which are needed
17 for development of said system;

18 a third step, to be taken by said user client, of developing
19 said system by combining files describing said plurality of said
20 functional units;

21 a fourth step, to be taken by said user client, of
22 transmitting question information about said functional units or
23 keyword information regarding information required for
24 development of said system to said server, when said system does
25 not operate properly due to malfunctions of said functional units
26 or when said information required for development of said system
27 is to be acquired; and

28 a fifth step, to be taken by said user client, of obtaining,
29 when necessary, a file of another functional units, based on reply

30 information to said question information or on said information
31 retrieved according to said keyword information and, if necessary,
32 of changing design to have another try of developing said system
33 and checking operations of a developed system.

1 10. A development-support system comprising:

2 a server used to provide information about functional units
3 each implementing a different function and files describing said
4 different function,

5 at least one developer client to develop said functional
6 units:

7 at least one user client to develop a system configured to
8 perform desired operations by combining said functional units;
9 and

10 wherein all of said server, said developer client, and said
11 user client are connected through an internet,

12 wherein said user client obtains files of a plurality of
13 said functional units, develops said system by combining files
14 of said plurality of functional units and checks operations of
15 the developed system and, as a result, when said developed system
16 does not operate properly due to a malfunction of any one of said
17 functional units, transmits question information about said
18 malfunction of said functional unit to said server,

19 wherein said server, after having accepted and registered
20 said question information, transmits said question information
21 to said developer client operated by said developer client of said
22 functional units,

23 wherein said developer client transmits reply information
24 to said question information to said server,

25 wherein said server, after having accepted and registered
26 said reply information, transmits said reply information to said
27 user client or another developer client operated by a user having
28 interests in said functional units.

1 11. The development-support system according to Claim 10,
2 wherein said user client makes an application for acquisition of
3 each of a plurality of functional units or of said plurality of
4 functional units collectively, said server examines said
5 application for each of said plurality of functional units or for
6 said plurality of functional units collectively and grants said
7 user client a right to acquire, and said user client, based on
8 the granted right, obtains files of said functional unit from said
9 server.

1 12. The development-support system according to Claim 10,
2 wherein said server, only when said question information has been
3 registered as coming from a user of said development-support
4 system and said question information has been transmitted from
5 a user having obtained files of said functional units, accepts
6 said question information.

1 13. The development-support system according to Claim 10,
2 wherein said server, when having already accepted and registered
3 said question information about said functional units, registers
4 said question information together with question information that
5 has been already registered and transmits contents of said
6 registration to said developer client.

1 14. The development-support system according to Claim 10,
2 wherein said server transmits a date when a reply to said question
3 information should be made to said developer client and, if there
4 is no reply by said date, transmits information urging said
5 developer client to make a reply and, if there is still no reply
6 even after said date, again transmits information urging said
7 developer client to make a reply on every predetermined date, to
8 said developer client.

1 15. The development-support system according to Claim 14,
2 wherein said server transmits information notifying that a
3 predetermined penalty is imposed every time said reply is delayed
4 by said one date behind said date or by said predetermined dates
5 behind said date, together with said information urging said
6 developer client to make said reply, and an amount equivalent to
7 said penalty is automatically drawn from a bank account every time
8 said reply is delayed by one date behind said date or by
9 predetermined dates behind said date.

1 16. The development-support system according to Claim 10,
2 wherein said server accepts said reply information only when said
3 reply information has been transmitted by a user who has been
4 registered as a user of said development-support system and who
5 has developed said functional unit.

1 17. The development-support system according to Claim 10,
2 wherein said interested user is a user having obtained said files
3 including a user having transmitted said question information,
4 a user having wanted to obtain said files but having not yet

5 obtained said files or, when there is a model functional unit that
6 has been used as a model for development of said functional unit,
7 a user having developed said model functional unit.

1 18. The development-support system according to Claim 10,
2 wherein said developer client transmits, when said developer of
3 said functional unit has found a malfunction of said functional
4 unit, contact information notifying that said functional unit has
5 said malfunction and information about a method for taking a
6 measure against said malfunction, to said server.

1 19. The development-support system according to Claim 10,
2 wherein said system is a semiconductor device and said functional
3 unit is a basic logic element or a basic logic circuit constructed
4 by combining a plurality of said basic logic elements.

1 20. The development-support system according to Claim 10,
2 wherein said system is a semiconductor device and said functional
3 unit is a central processing unit, storage device, buffer, and
4 peripheral device and wherein a file of said peripheral device
5 is so constructed as to be able to select either of a file to
6 implement its function by using hardware or a file to implement
7 its function by using software.

1 21. The development-support system according to Claim 10,
2 wherein said system is software and said functional units are
3 routines or objects to perform predetermined processing.

1 22. A storage medium storing system development control

2 program for causing a computer to execute functions of a
3 development-support system comprising:

4 a server used to provide information about functional units
5 each implementing a different function and files describing said
6 different function,

7 at least one developer client to develop said functional
8 units:

9 at least one user client to develop a system configured to
10 perform desired operations by combining said functional units;
11 and

12 wherein all of said server, said developer client, and said
13 user client are connected through an internet,

14 wherein said user client obtains files of a plurality of
15 said functional units, develops said system by combining files
16 of said plurality of functional units and checks operations of
17 the developed system and, as a result, when said developed system
18 does not operate properly due to a malfunction of any one of said
19 functional units, transmits question information about said
20 malfunction of said functional unit to said server,

21 wherein said server, after having accepted and registered
22 said question information, transmits said question information
23 to said developer client operated by said developer client of said
24 functional units,

25 wherein said developer client transmits reply information
26 to said question information to said server,

27 wherein said server, after having accepted and registered
28 said reply information, transmits said reply information to said
29 user client or another developer client operated by a user having
30 interests in said functional units.